

**Voice Activity Detector (VAD) -Based Multiple-Microphone Acoustic Noise Suppression**

**ABSTRACT**

5       Acoustic noise suppression is provided in multiple-microphone systems using Voice  
Activity Detectors (VAD). A host system receives acoustic signals via multiple microphones.  
The system also receives information on the vibration of human tissue associated with human  
voicing activity via the VAD. In response, the system generates a transfer function  
representative of the received acoustic signals upon determining that voicing information is  
10 absent from the received acoustic signals during at least one specified period of time. The  
system removes noise from the received acoustic signals using the transfer function, thereby  
producing a denoised acoustic data stream.